ARTIFACT SHEET

Enter artifact number below. Artifact number is application number + artifact type code (see list below) + sequential letter (A, B, C ...). The first artifact folder for an artifact type receives the letter A, the second B, etc.. Examples: 59123456PA, 59123456PB, 59123456ZA, 59123456ZB

_____

Indicate quantity of a single type of artifact received but not scanned. Create individual artifact folder/box and artifact number for each Artifact Type.

☐ CD(s) containing computer program listing
Doc Code: Computer Artifact Type Code: P

☐ Stapled Set(s) of Extra Color Drawings/Photographs
Doc Code: Artifact Artifact Type Code: C

☐ CD(s) containing pages of specification ☐
and/or sequence listing
Doc Code: Artifact Artifact Type Code: S

☐ CD(s) with content unspecified
Doc Code: Artifact Artifact Type Code: U

☐ Microfilm(s)
Doc Code: Artifact Artifact Type Code: F

☐ Video tape(s)
Doc Code: Artifact Artifact Type Code: V

☐ Model(s)
Doc Code: Artifact Artifact Type Code: M

☐ Bound Document(s)
Doc Code: Artifact Artifact Type Code: B

☐ Other, description: _____
Doc Code: Artifact Artifact Type Code: Z

FIG. 1

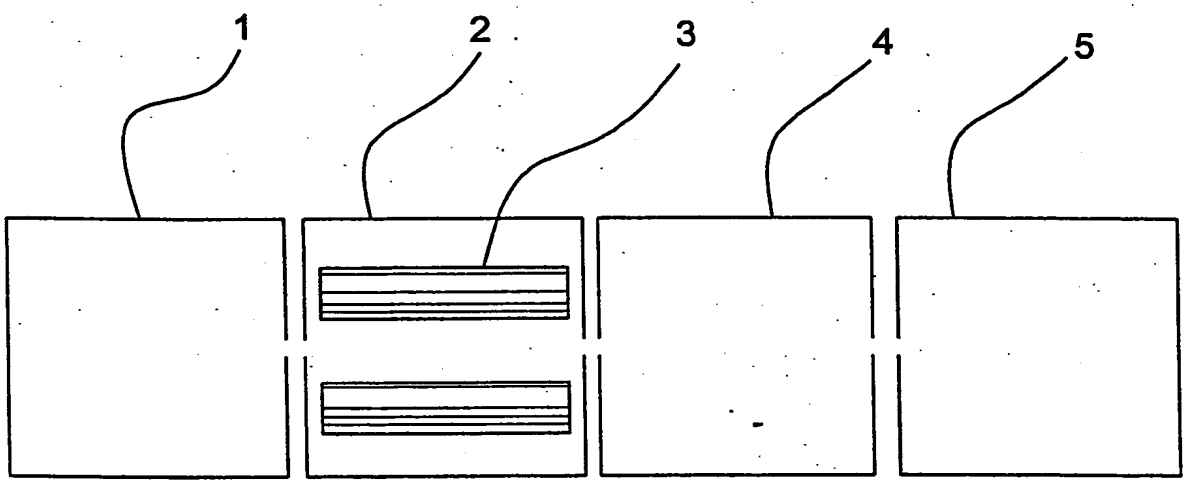


FIG. 2

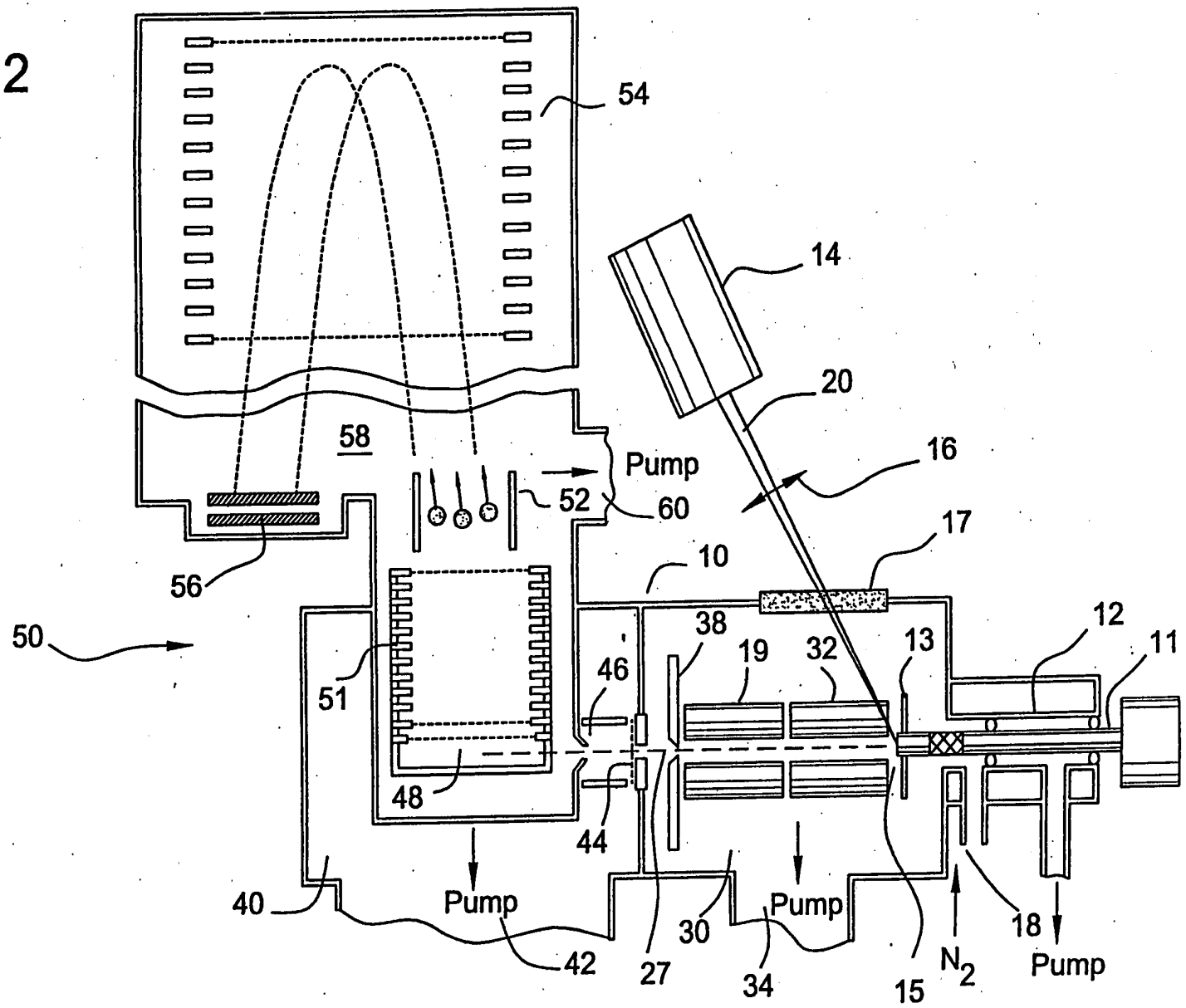

54
14
20
16
58
Pump
52
60
17
56
10
50
38
12
19
32
13
11
46
51
48
44
40
Pump
Pump
Pump
42
27
30
34
15
N_2
18

FIG. 3

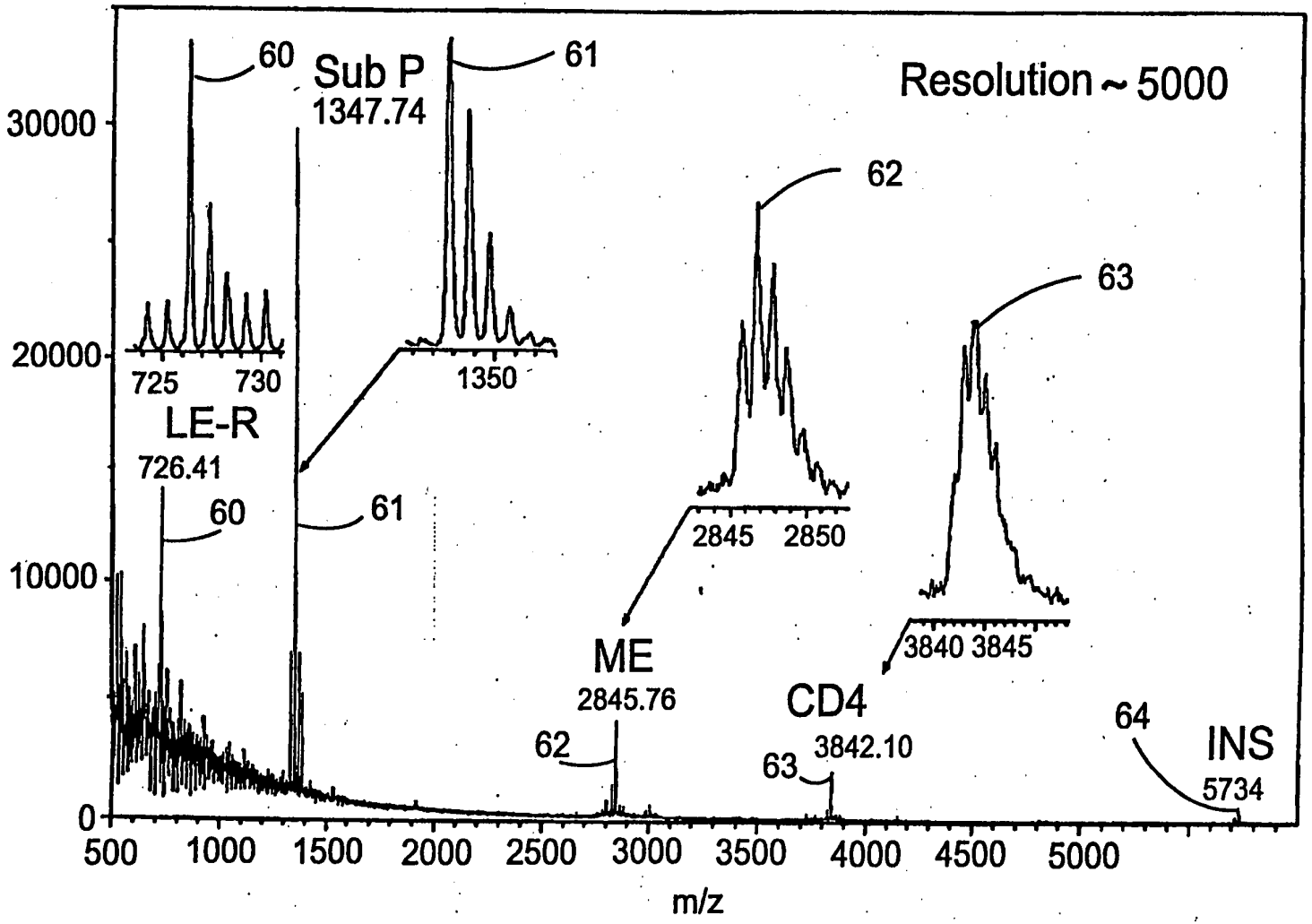

Resolution ~ 5000
60
Sub P
1347.74
61
62
63
64
725
730
1350
2845
2850
3840
3845
LE-R
726.41
ME
2845.76
CD4
3842.10
INS
5734
30000
20000
10000
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
m/z

FIG. 4

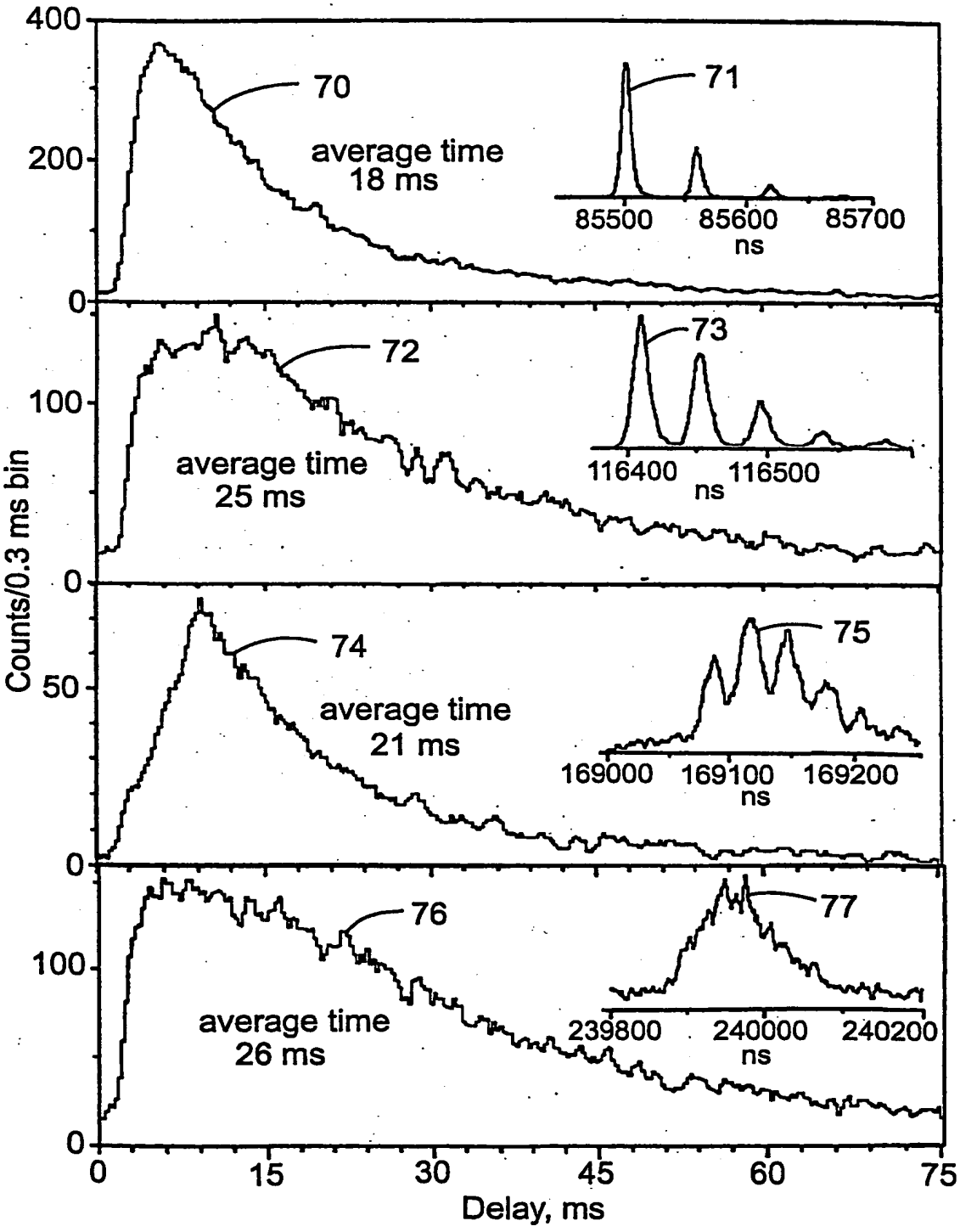

400
200
0
70
average time
18 ms
71
85500
85600
85700
ns
100
0
72
average time
25 ms
73
116400
116500
ns
Counts/0.3 ms bin
50
0
74
average time
21 ms
75
169000
169100
169200
ns
100
0
76
average time
26 ms
77
239800
240000
240200
ns
0
15
30
45
60
75
Delay, ms

FIG. 5

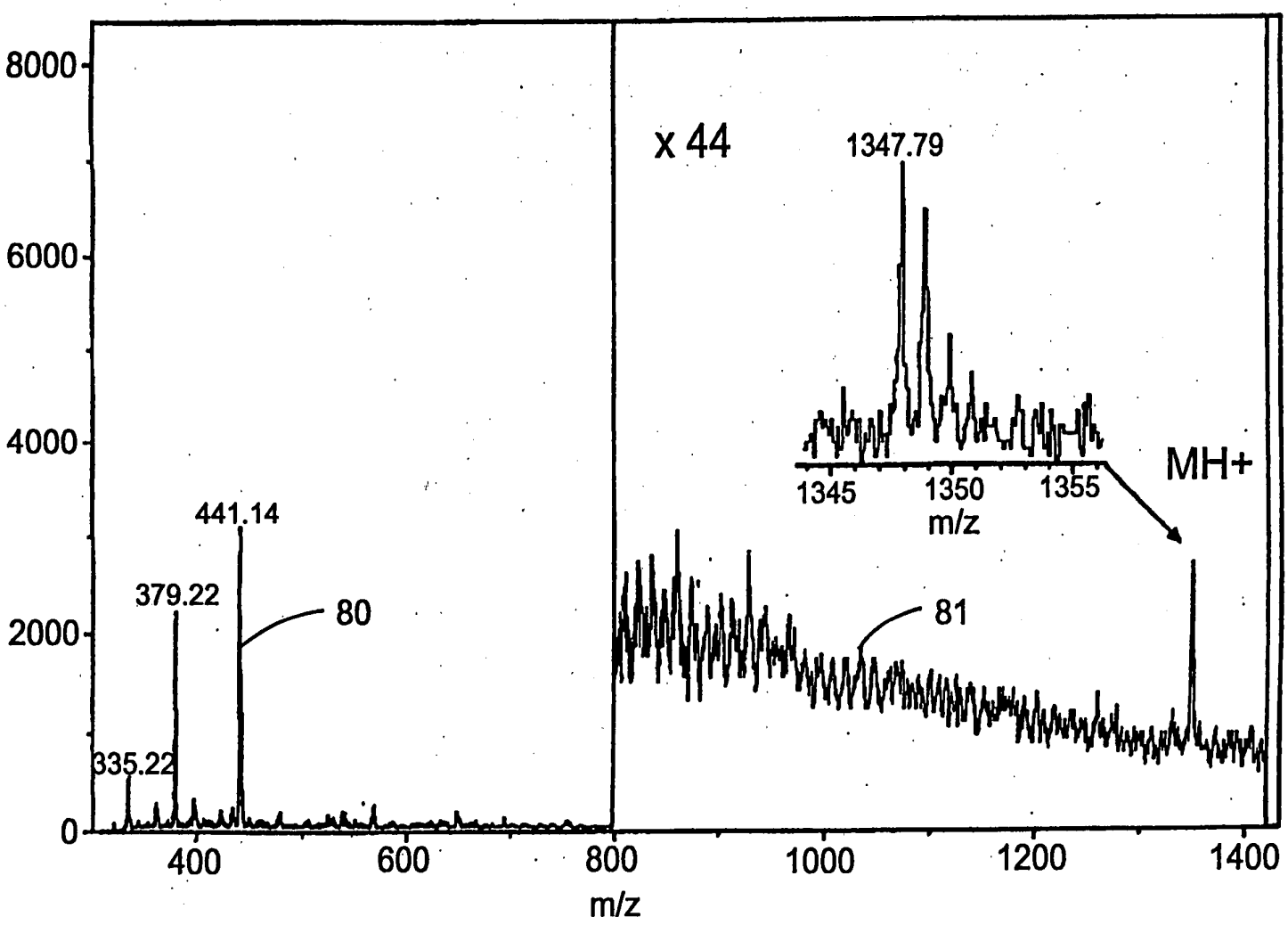

8000
6000
4000
2000
0
400
600
800
1000
1200
1400
m/z
x 44
1347.79
1345
1350
1355
m/z
MH+
441.14
379.22
335.22
80
81

FIG. 6

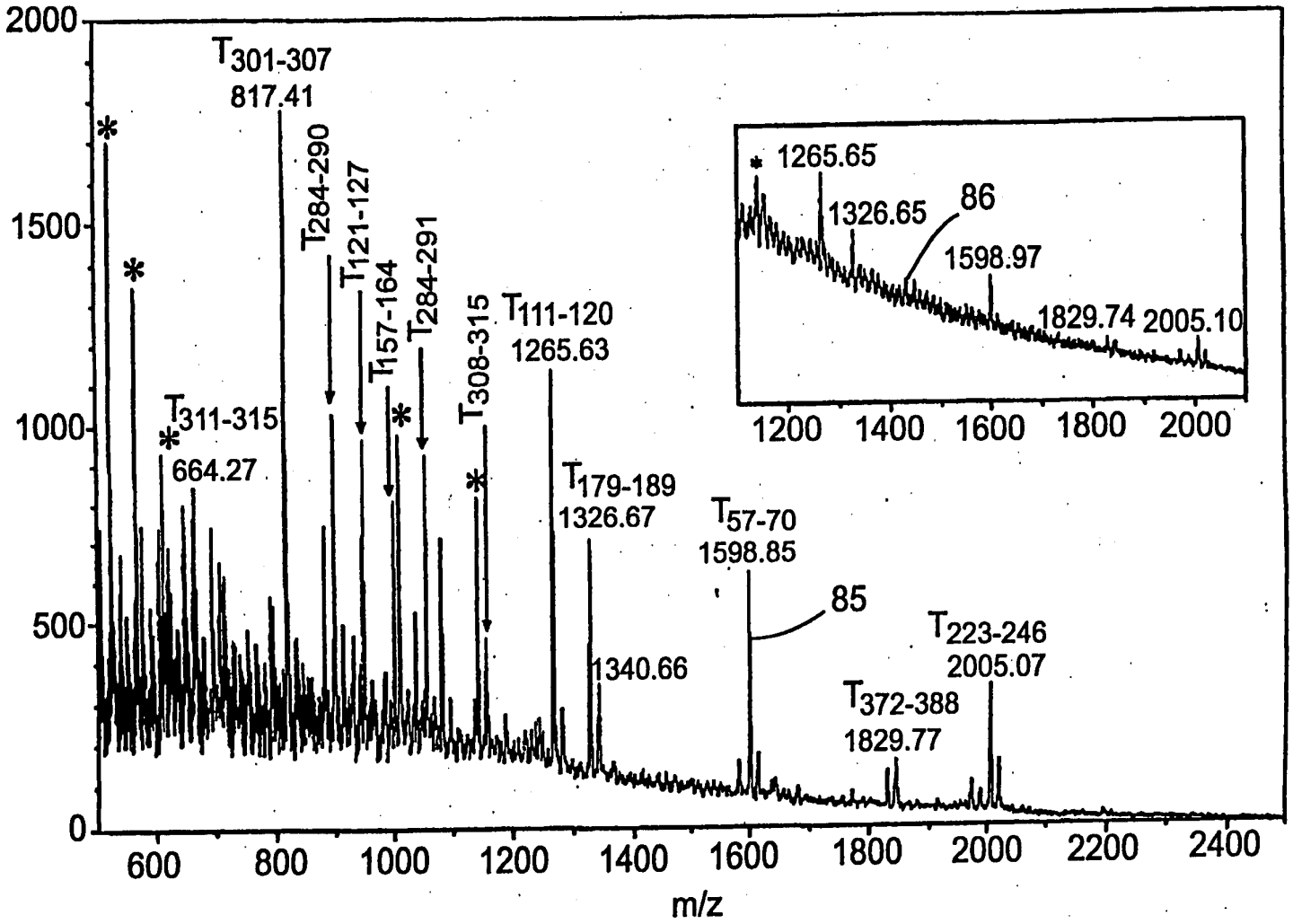
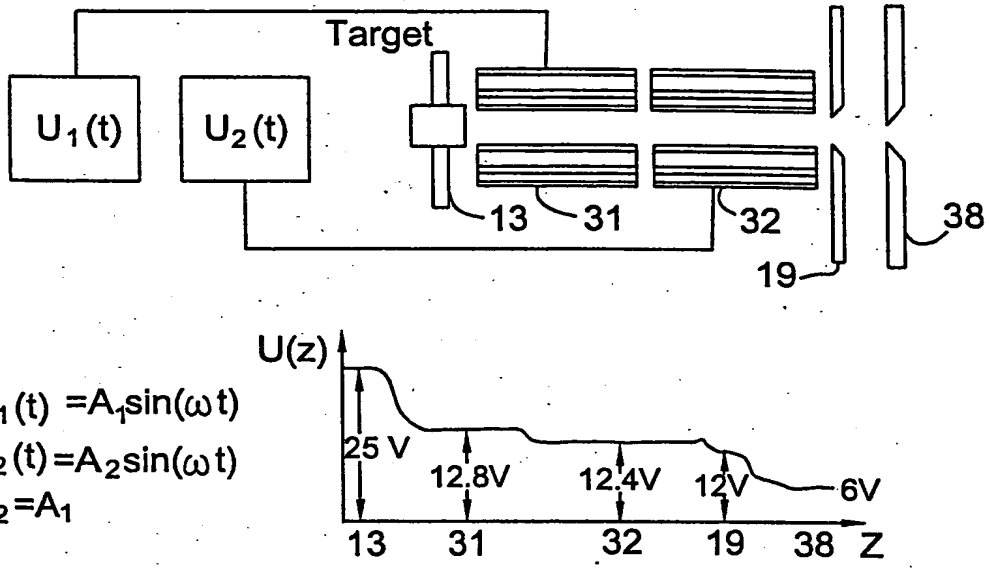

2000
1500
1000
500
0
600
800
1000
1200
1400
1600
1800
2000
2200
2400
m/z
T301-307
817.41
T284-290
T121-127
T157-164
T284-291
T308-315
T111-120
1265.63
T311-315
664.27
T179-189
1326.67
T57-70
1598.85
85
1340.66
T223-246
2005.07
T372-388
1829.77
1265.65
1326.65
86
1598.97
1829.74
2005.10
1200
1400
1600
1800
2000

FIG. 7A

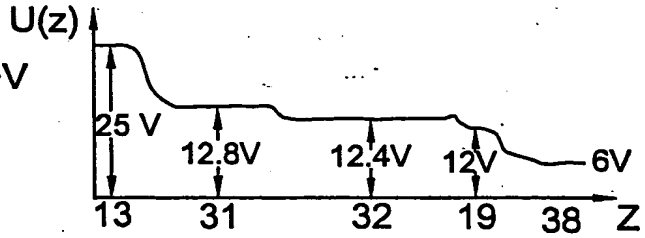


$U_1(t) = A_1 \sin(\omega t)$

$U_2(t) = A_2 \sin(\omega t)$

$A_2 = A_1$

FIG. 7B

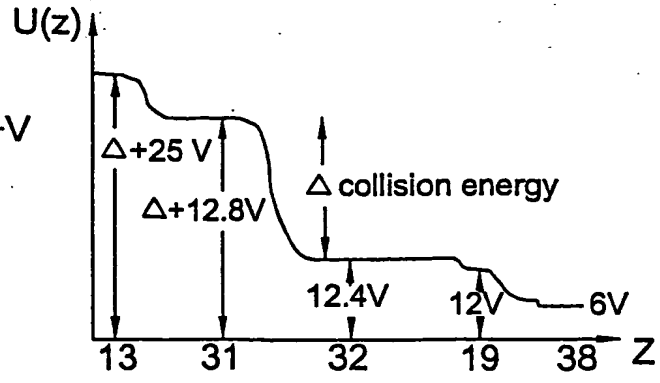


$U_1(t) = A_1 \sin(\omega t) + V$

$U_2(t) = A_2 \sin(\omega t)$

$A_1 = 1/3 A_1$

FIG. 7C



$U_1(t) = A_1 \sin(\omega t) + V$

$U_2(t) = A_2 \sin(\omega t)$

$A_1 = 1/3 A_2$

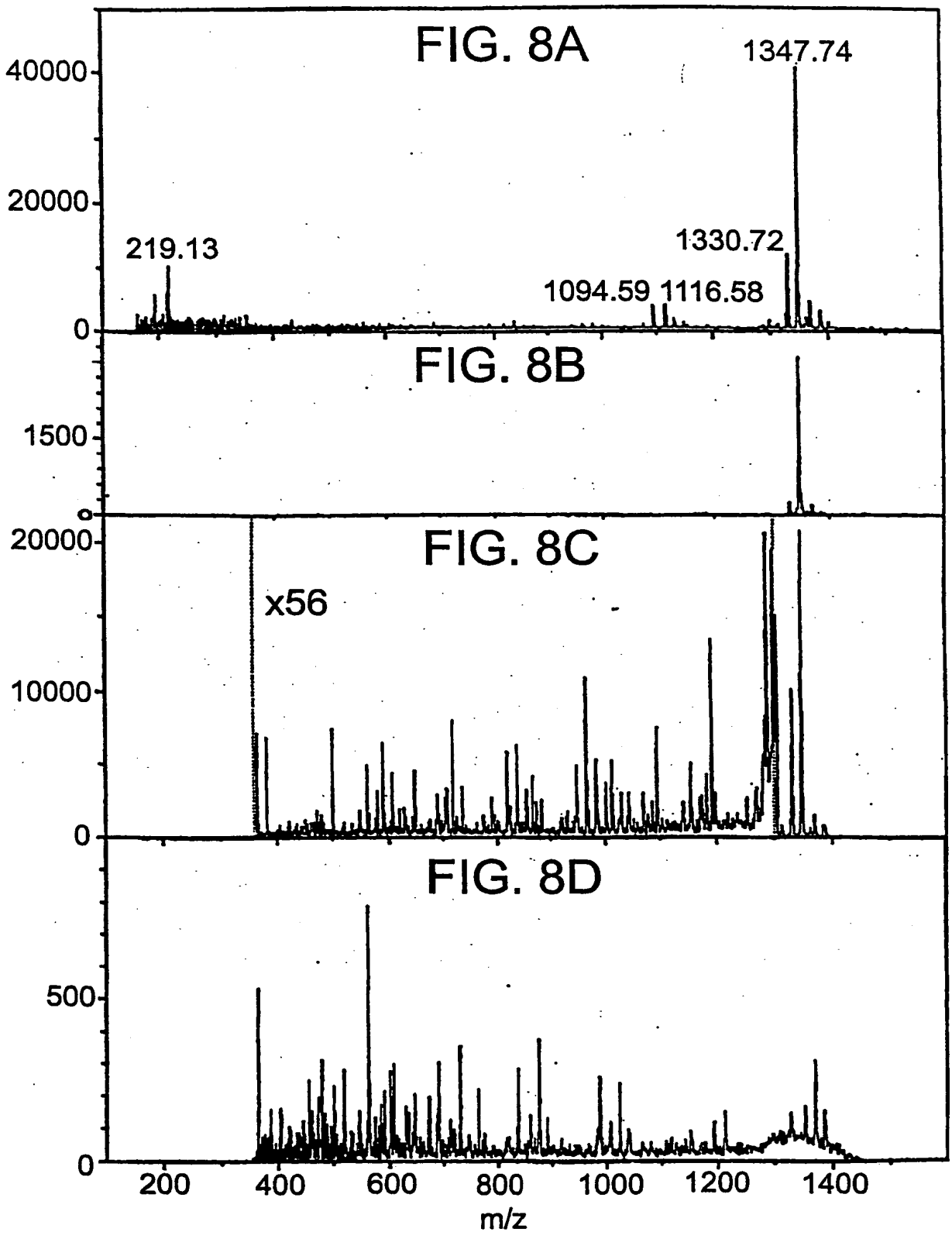


FIG. 8A
1347.74
40000
20000
219.13
1330.72
1094.59 1116.58
0
FIG. 8B
1500
0
FIG. 8C
20000
x56
10000
0
FIG. 8D
500
0
200
400
600
800
1000
1200
1400
m/z

FIG. 9

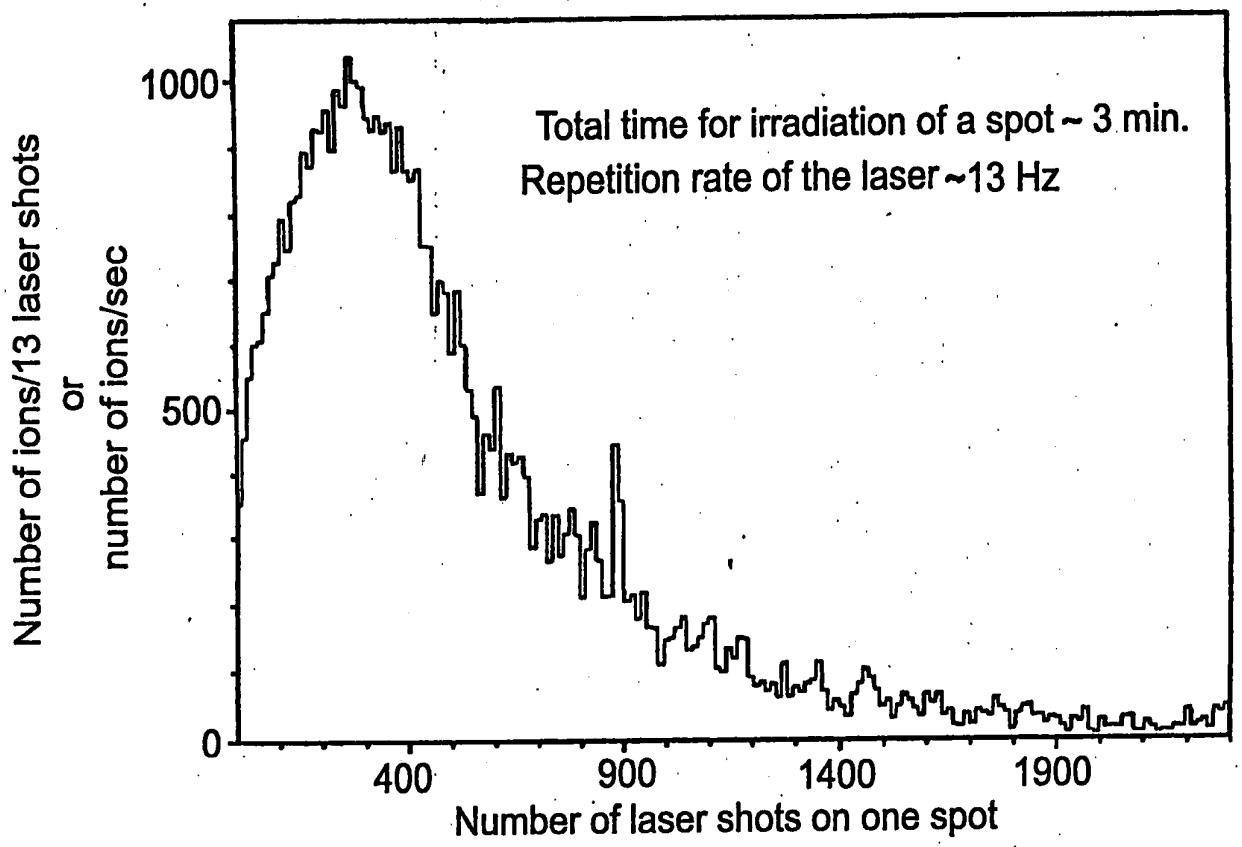

Number of ions/13 laser shots
or
number of ions/sec
1000
500
0
Total time for irradiation of a spot ~ 3 min.
Repetition rate of the laser ~13 Hz
400
900
1400
1900
Number of laser shots on one spot

FIG. 10

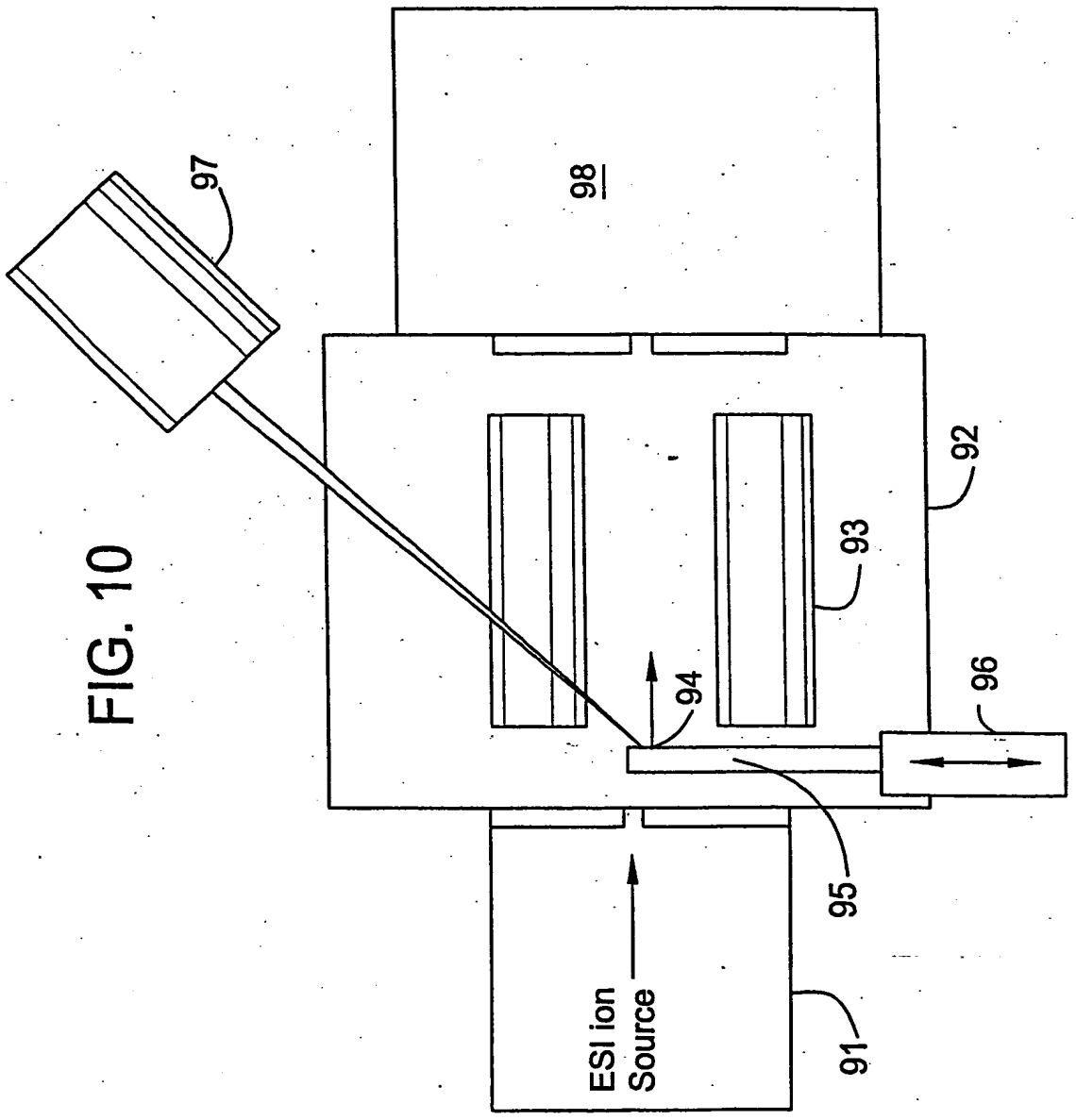
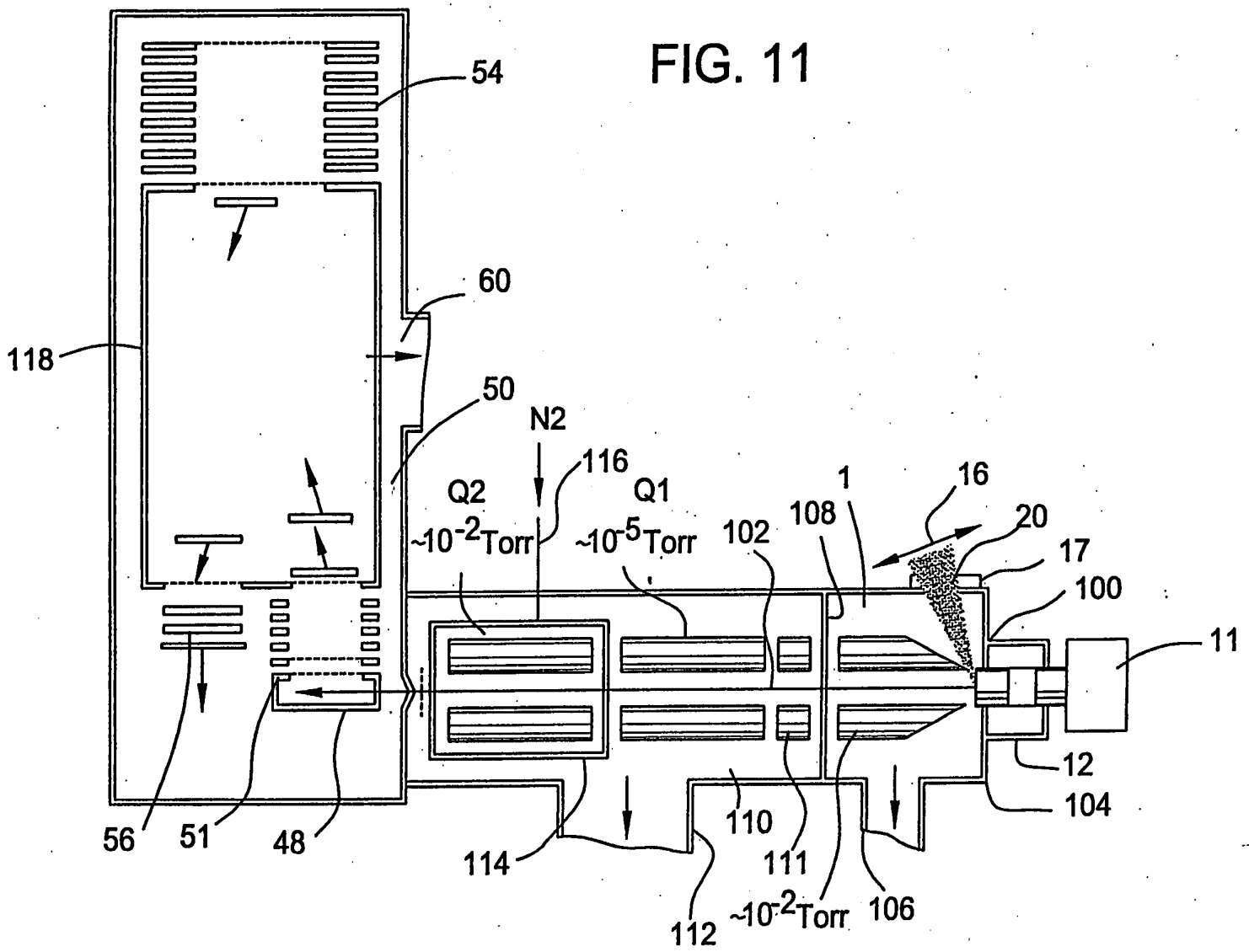


FIG. 11


54
60
118
50
N2
116
Q2
~10-2Torr
Q1
~10-5Torr
102
108
1
16
20
17
100
11
12
104
56
51
48
114
110
111
112
~10-2Torr
106

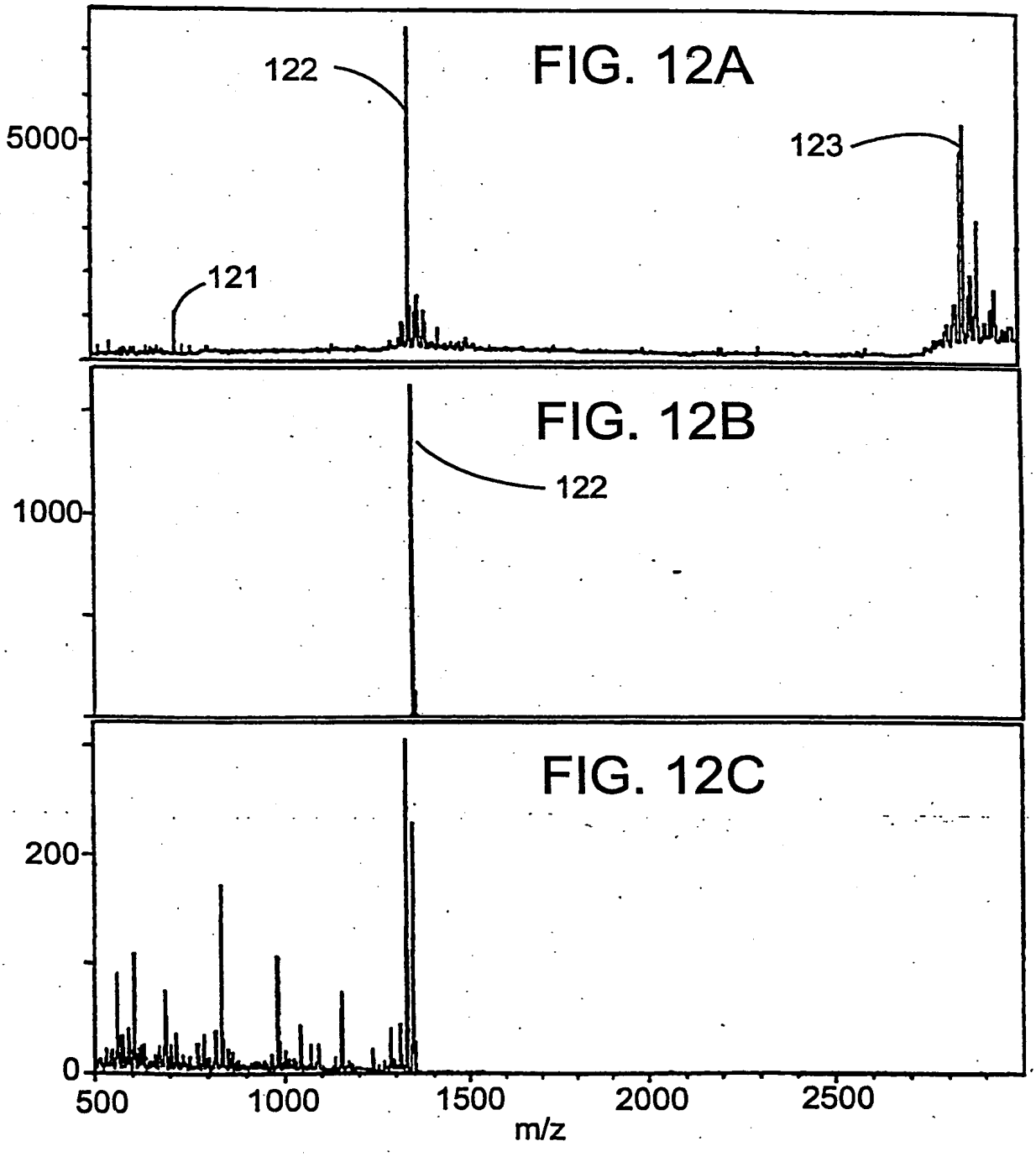


FIG. 12A
122
123
121
5000
FIG. 12B
122
1000
FIG. 12C
200
0
500
1000
1500
2000
2500
m/z

FIG. 13

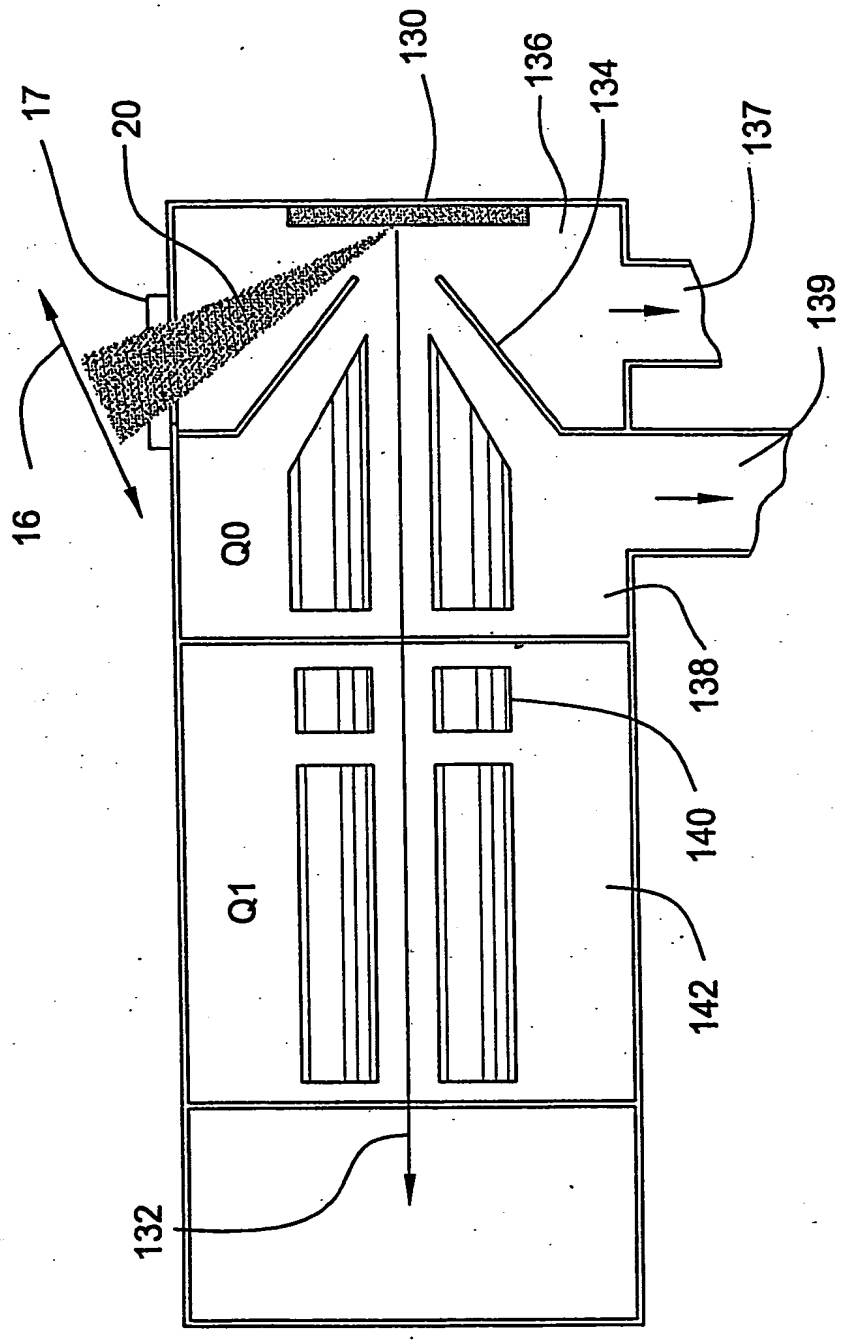


FIG. 14

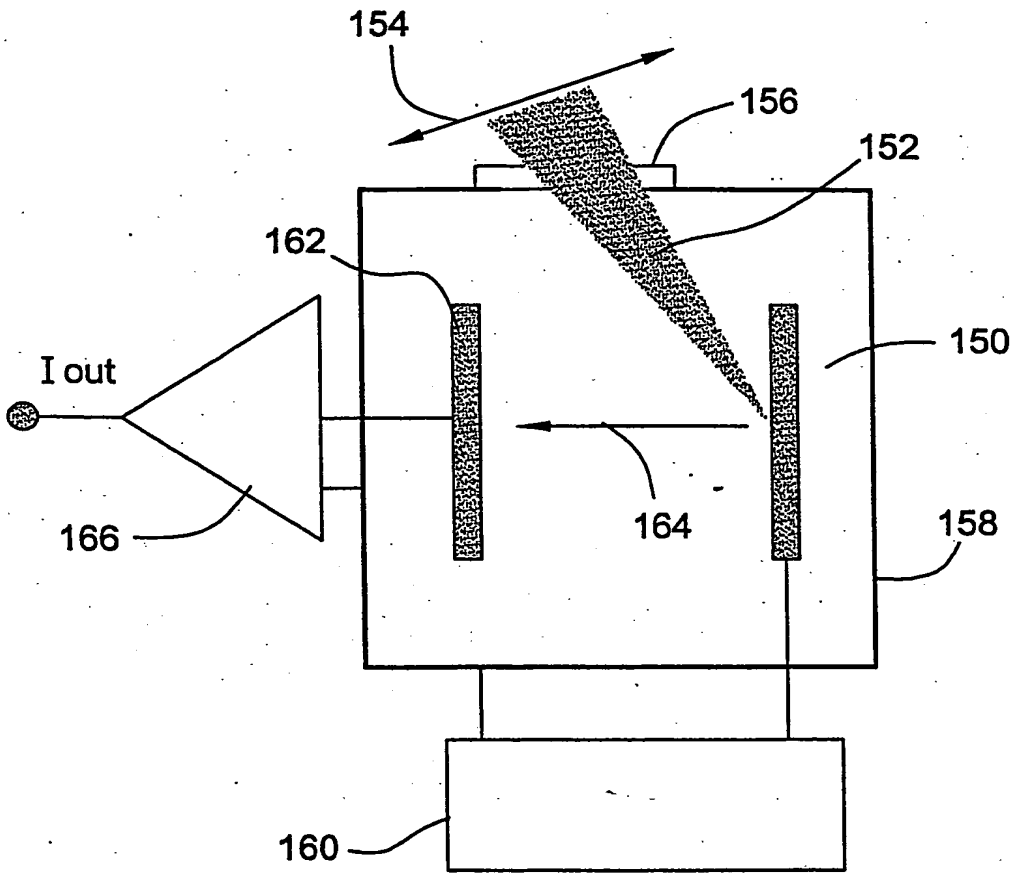
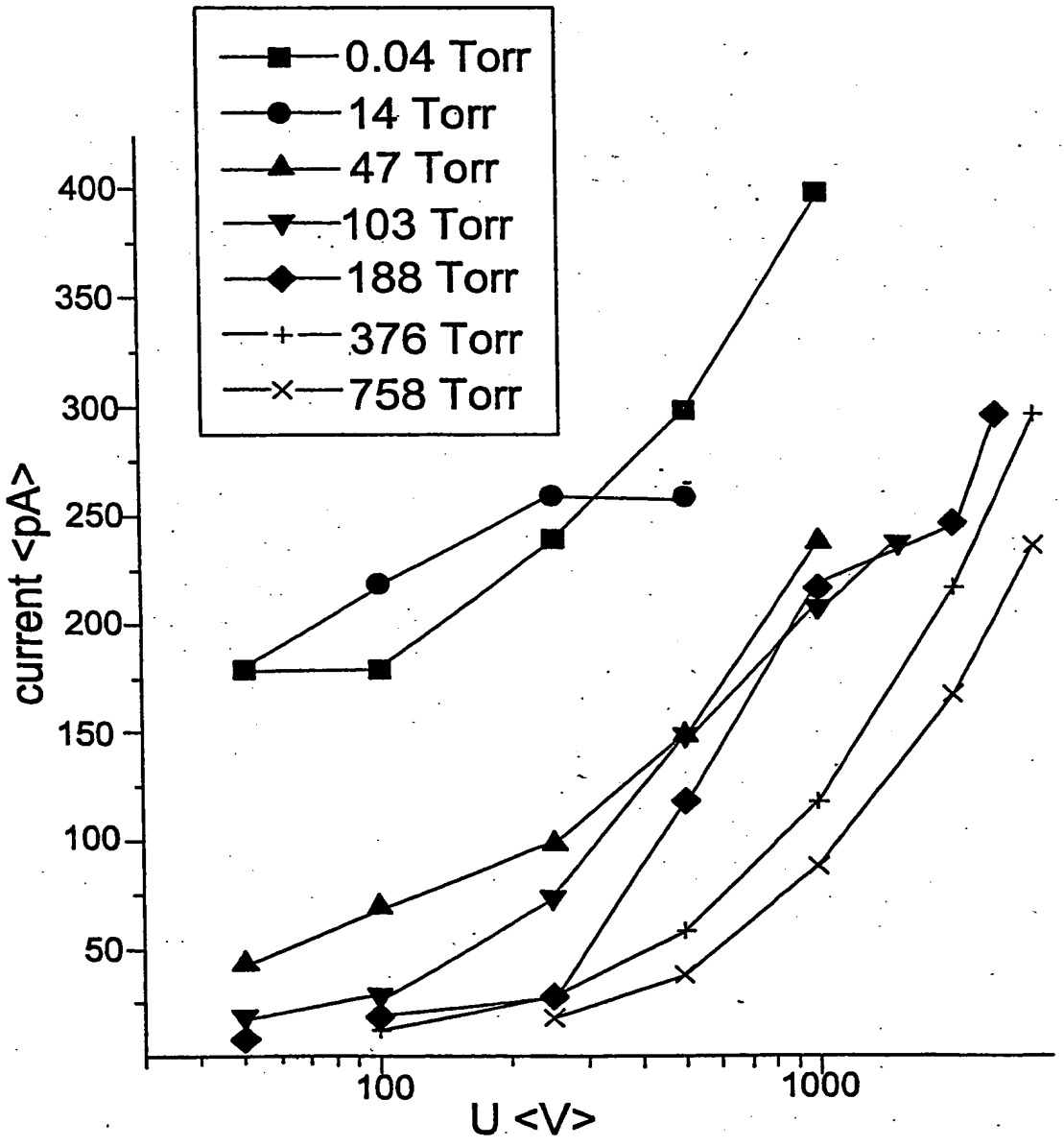


FIG. 15


0.04 Torr
14 Torr
47 Torr
103 Torr
188 Torr
376 Torr
758 Torr
current <pA>
400
350
300
250
200
150
100
50
100
1000
U <V>